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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,483	03/25/2004	Hironori Osuga	033036M073	5757
441	7590	12/01/2006	EXAMINER	
SMITH, GAMBRELL & RUSSELL 1850 M STREET, N.W., SUITE 800 WASHINGTON, DC 20036			SELLERS, ROBERT E	
			ART UNIT	PAPER NUMBER

1712

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/808,483

Applicant(s)

OSUGA, HIRONORI

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,4,6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

This application contains claims 4 and 6 drawn to inventions nonelected with traverse in the response filed May 2, 2006. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144 and MPEP § 821.01).

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in the non-Final rejection mailed August 22, 2006.

Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichiroku et al. Patent No. 6,506,822 in view of Shiobara et al. Patent No. 6,310,120 (Shiobara et al. '120) and Shintai et al. Patent No. 5,362,775.

1. The amendment filed November 21, 2006 converts claim 2 into an independent claim by incorporating the language of independent claim 1 wherefrom it depended. Accordingly, Japanese Patent No. 4,132,727 is withdrawn due to the lack of recitation of the claimed polyorganosiloxane in an amount of from 0.3 to 2.0% by weight as indicated in the non-Final rejection on page 4, paragraph 6. The proportion of polyorganosiloxane has also been deemed to overcome Ichiroku et al.

Art Unit: 1712

2. However, as revealed in the Remarks section of the amendment on page 5, the second paragraph, "Ichiroku et al. also teaches the use of a silicone-stress [sic] reducing agent, i.e. component (C)." Ichiroku et al. (col. 5, line 66 to col. 6, line 2) reports a level of silicone stress-reducing agent of from 1 to 25 parts by weight per 100 parts by weight of the epoxy resin and curing agent, which is even less when including the presence of from 100 to 1000 parts by weight of the inorganic filler such as alumina (col. 9, lines 54-56 and col. 10, lines 15-18). The composition requires a foam-suppressing composition (D) comprising (D-i) from 5 to 60% by weight of a hydrophobic organopolysiloxane and 0.1 to 20 parts by weight of silica having a surface area of at least  $100 \text{ m}^2/\text{g}$  and (D-ii) from 5 to 95% by weight of a polyoxyalkylene-modified silicone oil present in a proportion of  $1 \times 10^{-4}$  to 20 parts by weight per 100 parts by weight of epoxy resin and curing agent (col. 2, lines 23-61).

3. The silicone stress-reducing agent (C), hydrophobic organopolysiloxane in component (D-i) and the polyoxyalkylene-modified silicone oil all fall within the claimed polyorganosiloxane. The minimum concentration of the combined silicone polymers of 1 part by weight of silicone stress-reducing agent +  $1 \times 10^{-4}$  part by weight of hydrophobic organopolysiloxane and polyoxyalkylene-modified silicone oil is embraced by the claimed parameters of from 0.3 to 2.0% by weight. The inadvertent oversight of this teaching is regretted.

Art Unit: 1712

4. Shintai et al. is relied upon as a secondary reference to teach the use of the alumina of Ichiroku et al. in spherical form (col. 11, lines 22-26) and need not recite each and every element of the claims; otherwise it would have been applied as a primary reference. Ichiroku et al. establishes the content of silicone polymers within the claimed range as espoused in the previous paragraph.

Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. Patent No. 5,049,596 in view of (Shiobara et al. '120 and Shintai et al.) and Shiobara et al. Patent No. 6,001,901 (Shiobara et al. '901).

The rejection is maintained for the reasons of record set forth in the non-Final rejection. The arguments filed November 21, 2006 have been considered but are unpersuasive.

5. The comparison between Example 2 (specification, page 15, Table 1) and Comparative Example 6 (page 16, Table 2) addressing the criticality of the claimed spherical alumina over spherical silica is not commensurate in scope with the claims. The testing of a single amount of 90% by weight does not establish the criticality of a quantity of as low as 85% by weight denoted in new claim 7.

Art Unit: 1712

6. Example 2 and Comparative Examples 3 and 4 compare the surface area of 180 m<sup>2</sup>/g within the claimed range vs. 100 and 340 m<sup>2</sup>/g, respectively, outside of the claimed range. However, it is unclear whether the surface areas in the comparative examples are reflective of that inherent in the Aerosil microfine silica powder exemplified in Fujimoto et al. (col. 4, lines 62-64 and col. 6, Table 1). Furthermore, the evidence is not commensurate in scope with the claims particularly with respect to the criticality of the maximum of 280 m<sup>2</sup>/g which is significantly less than the tested 340 m<sup>2</sup>/g.

7. Example 2 and Comparative Examples 1 and 2 attempt to confirm the criticality of the claimed proportion range of ultrafine silica by comparing a content of 0.5% by weight with amounts of 0.1% and 1.0% by weight, respectively. Fujimoto et al. in Table 1 shows a calculated concentration of ultrafine silica of 0.05% by weight. The evidence is not commensurate in scope with the claims concerning a representative sampling of the claimed proportion range of from 0.2 to 0.8% by weight.

8. Example 2 and Comparative Example 5 address the criticality of the presence of the claimed polyorganosiloxane. The testing of a single epoxy- and polyether-functional polydimethylsiloxane of formula (1) (page 14) does not establish the criticality of the myriad diverse structures within the ambit of the claimed polyorganosiloxane such as those described on page 7, line 19 to page 8, line 13. The showings are not commensurate in scope with the claims with respect to claimed amount of polyorganosiloxane of from 0.3 to 2.0% by weight since only a single quantity of 1.0% by weight is exemplified.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



Robert Sellers  
Primary Examiner  
Art Unit 1712